

BOOK REVIEWS

1. The Concise Flora of Singapore, Gymnosperms and Dicotyledons.

Hsuan Keng. Singapore University Press, National University of Singapore, Kent ridge, Singapore 0511. 1990. xxiii + 222 pp. + 116 pp. illus. + text illus. ISBN 9971-69-135-3 (Paper), S\$42.00

In 1819 when Singapore founded it was almost entirely covered by trees, with about 82% of the vegetation under lowland dipterocarp forest, 13% under mangrove forest and 5% under freshwater swamp forest. By 1884 when the first report on the forests of Singapore was published, only about 7% of the original dry-land forest remained. This was a consequence of the rapid development of the colony creating a great demand for fuelwood and agricultural land. Today most of Singapore's remaining native forests occupy about 2800 hectares. About 2000 hectares are gazetted as Nature Reserves, including less than 100 hectares of "primary" areas.

The National Parks Board of Singapore is entrusted with the care of these Reserves and is actively managing them for recreation, conservation, research and education. There is a growing demand in Singapore for outdoor recreation and also an increasing awareness and appreciation of nature as indicated by the very high visitor numbers to the Nature Reserves and great enthusiasm for the Nature society (Singapore) activities. There is also an increasing interest in native species for amenity planting where once fast growing exotics were preferred. To the managers, members of the public and others interested in the flora of Singapore, this publication is timely.

According to Keng there are 3 families, 3 genera and 8 species of Gymnosperms, and 125 families, 574 genera and 1,285 species of dicotyledons native to Singapore. All the families are given a brief description. Genera are not described but all species are with a useful concise description that also include notes on ecology, occurrence/origin and uses. Where available, vernacular and Chinese names are given. With exceptions, a herbarium specimen is cited for each native species.

In addition to the native species, over 650 species of naturalised and cultivated plants are included in this Flora. The large numbers of such plants included is a distinctive and valuable feature increasing the usefulness of the book. Plants ranging from Victoria amazonica, introduced to the Botanic Gardens, to common vegetables like Cucurbits and Brassicas are found together with ornamentals like Adenium obesum and Ipomoea quamoclit and fruits such as Manilkara zapota and Artocarpus heterophyllus.

The book is provided with 116 pages of simple line drawings presented four to a page, mostly by Ro-siu Ling Keng, the author's wife. Although many of the plates suffer a loss of detail in the reduction and printing they still serve the very useful function of providing visual images for many of the species and aiding identification. A list of the illustrations is provided after the contents page following the phylogenetic order that the families are arranged in. As the species illustrated are not also included in the index, it is not easy for the reader to quickly determine if a particular species is illustrate or not.

Keys to genera or groups of genera (in cases of large families) are provided. Keys to species have been excluded because of the constraint of space and because, "many useful keys to species are available in the regional literature" (pg. xxii). This is a pity as keys specific to the species from Singapore can quickly lead to their identification. Not many readers will have access to the relevant regional literature and in some cases practical keys are not even available.

At the back, before the index, Keng has provided separate keys to the families of Gymnosperms and Dicotyledons. These are useful keys that have been adapted from his earlier book, "Orders and Families of Malayan Seed Plants" (3rd ed. 1983).

The author and illustrator must be congratulated for putting together this very practical and useful manual. Users will be looking forward to the companion volume on the Monocotyledons.

A Flora is a permanent record of plants, and though plant names may change, the plants do not. This book will remain useful for many years to come and users will refer to their copies repeatedly. It is indeed a great pity that the printing, binding, cover and paper used do no justice to the value of the book. The herbarium copy is already battered and dog-eared, the cover picture fading, the binding becoming loose and pages threatening to come apart; all through heavy (but normal) use. Let us hope the publishers do a better job with the companion volume.

2. The Bamboos of Sabah.

Soejatmi Dransfield, 1992, Sabah Forest Records No. 14. Forest Department Sabah, Malaysia. 94pp. ISBN 983-9554-03-4. M\$40, postage extra. Available from, Senior Research Officer, Forest Research Centre, Sepilok, P.O. Box 1407, 90007 Sandakan, Sabah, Malaysia.

Bamboos are giant grasses, typically woody and with hollow stems. They are found throughout the tropical to temperate regions of the world, except Europe and Western Asia, between 46° north and 47° south, from the lowlands up to 4000 m. The majority occur in the lowlands in the tropics of Asia and America with very few in Africa. Their natural range has been greatly extended by cultivation for use as a technological material and as ornamentals. It is perhaps in Asia that bamboos are put to the greatest use; from angklungs to house-posts, and windmills to xylophones. The young shoots of many species are used as food.

In an age of rapid loss of tropical forests, bamboos, fast growing and with multiple uses, offer a way of producing both food and woody material for technological and industrial uses. The first stage is the documentation of the species so that users and others interested can tell one bamboo from another. This book by Soejatmi Dransfield, a leading bamboo specialist, describes all the bamboos found in Sabah. There are 10 genera (one still unnamed) and 35 species (4 still unnamed). Most species have a very limited distribution and the author predicts that more species can be expected to be found. An introductory part provides an outline of bamboo morphology. This is followed by a key to the genera. Subsequently, the genera and species are treated alphabetically. Under each genus there is a key to species. All genera and species are provided with a fairly